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EXAMINER
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HUYNH, SON P

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/547,474

Applicant(s)

SANDERS, MARK

Examiner

Son P. Huynh

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,8-17,19-37,39-52,54-63 and 66-83 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-17,19-37,39-52,54-63 and 66-83 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-5, 8-17, 19-37, 39-52, 54-63, 66-83 have been considered but are moot in view of the new ground(s) of rejection.

Claims 6-7, 18, 38, 53, 64-65 have been canceled.

### ***Claim Objections***

2. Claim 46 objected to because of the following informalities:

Claim 46, lines 2-3 recites the limitation "... the process of claim 18" should be replaced as – the process of claim 19-- because claim 18 have been canceled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2623

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-5, 9-17, 19, 30-34, 36-37, 40-46, 51-52, 54-57, 59-61, 63, 67-68, 70-77, 79-81 and 83 are rejected under 35 U.S.C. 102(e) as being anticipated by Gordon et al. (US 5,920,700).

Regarding claim 1, Gordon discloses a process of propagating viewing assets to a system of video servers (headends, hubs, etc. with storage devices –figures 2-8), the process comprising:

generating a propagation priority for a selected viewing asset that represents a predicted economic value of propagation the selected viewing asset to a target video server (generating a priority for transmit for a copy of asset that represents a predicted economic value i.e. high demand for the asset, to be transmitted to the storage device at particular head end or hubs – figure 2, col. 5, line 41-col. 6, line 55, col. 7, lines 27-67, for example, predicted economic value for unused asset is low since no one demand for it), the propagation priority comprising a first priority associated with the viewing asset and a second priority associated with the target video server (propagation the copy viewing asset to the target storage device based on type of asset, release date, version, source ID, etc. – see including, but is not limited to, col. 7, line 26-col. 8, line 40,(interpreted as claimed “first priority associated with the viewing asset”) and user demand at particular storage device/location, available storage space of each storage

Art Unit: 2623

device, availability of bandwidth for asset transfer between devices, etc. – see including, but is not limited to, col. 3, lines 43-67; col. 5, lines 41-63; col. 7, line 27-col. 9, line 42);

Gordon further discloses metadata of the asset comprises expiration date, license termination date, information that indicate the asset is unused or overused etc. (col. 5, lines 45-62; col. 6, lines 40-50; col. 7, lines 10-15; col. 8, lines 18-67). Inherently, a retention value (i.e. associated with the expiration time, overused asset, unused asset, asset's useful life, etc.) is generated for one or mote viewing assets presently stored on the target video server (storage device), each retention value representing a predicted economic value of retaining a replica of a corresponding viewing asset on the target video server so that the unused assets, or asset with expired date, stored in the storage device is deleted – see 7, lines 10-15; col. 8, line 41-60).

Gordon additionally discloses in addition to removing the unused assets, or assets with expired date, the usage manager can copy popular asset to the storage device, the assets are copied in order based on popularity (i.e., most used assets are copied first) and based on utilization bandwidth (col. 8, line 61-col. 9, line 42). Thus, a missing portion of a replica of the selected viewing asset (asset that is not stored/or asset does not have enough copies in the storage device) is inherently copied to the target video server (storage device) in response to determining that the propagation priority of the selected viewing asset exceeds a sum of retention values of the one or more stored assets on the target video server (propagation priority of the new/popular asset exceeds the retention values of the assets stored in video server) so that the unused asset or asset with expired date are deleted.

Regarding claim 2, Gordon further discloses copying a missing portion comprising writing the missing portion of the replica of the selected asset onto a storage region of the target video server on which is already stored a replica of one or more viewing assets (writing a copy of new/popular assets into the storage device that stored unused asset or another copy of the asset (see including, but are not limited to, col. 8, line 41-col. 9, line 43)).

Regarding claim 4, Gordon further discloses copying of the missing portion of the replica of the selected includes the copying the missing portion from one or more video servers (e.g. copying new/popular asset from storage device located in Orlando Florida to storage devices in New York, Denver, Chicago, Los Angeles, etc. -col. 3, lines 20-37).

Regarding claim 5, Gordon further discloses assigning priority for asset to be copied to the storage device such as most used assets are copy first, news files take priority over movies between 6:00 P.M and 7:30 P.M (col. 7, lines 27-67; col. 8, line 61-col. 9, line 13). Thus, the process inherently comprising:

assigning propagation priorities to a plurality viewing assets (i.e. news files is assigned higher priority than movie files between 6:00 pm to 7:30 pm, or most used asset has highest priority);

ranking the viewing assets according to the assigned priority (queue assets to be copied – col. 8, line 65-col. 9, line 12); and selecting an asset in response to the asset having a rank higher than a preselected minimum rank (i.e. most used assets are copied first).

Regarding claim 9, Gordon further discloses all registries are updated to reflect the new copy and its location, deleted copies, etc. (col. 6, lines 25-65; col. 7, lines 17-25). As a result, retention values of replicas of viewing assets remaining on the target server are updated in response to the copy of the missing portion (i.e. new copy) of the replica of the selected viewing asset.

Regarding claim 10, Gordon further discloses selecting the viewing assets to include video files for at least one of the movies, news emissions, and shopping emission (col. 1, lines 14-25; col. 7, lines 32-67).

Regarding claim 11, Gordon further discloses the links between one asset and any other asset or sets of assets and application which in use the asset. when the scheduling manager processes a file deletion request, operations 138B determines whether there are any preexisting links to this asset which remain in use (col. 6, line 56-col. 7, line 15). Thus, the replica of one or more viewing assets inherently includes a replica of an asset element shared by replicas of two sets on the target server so that the assets are linked to each other.

Regarding claim 12, the limitations of a process that corresponding to the limitations of process as claimed in claims 1 and 5, and are analyzed as discussed with respect to the rejection of claims 1 and 5.

Regarding claim 13, Gordon further discloses assigning, a viewing asset to a usage class (i.e., news, movies, poster, etc. – col. 7, lines 30-65; col. 9, lines 30-42), the usage class providing a portion of an initial value for propagation priorities associated with assets assigned to the class (see col. 7, lines 30-65, col. 9, lines 30-42).

Regarding claim 14, Gordon further discloses accumulating usage data on individual assets stored on the video servers; and updating the propagation priorities based on the usage data (usage manager keep tracks of usage of asset and used the usage data to copy the asset i.e., most used assets are copied first – col. 8, line 40-col. 9, line 13)

Regarding claim 15, Gordon further discloses the digital assets include a variety of different types of content such as compressed video files (i.e., MPEG-2 compression), compressed audio files (col. 1, lines 14-25, lines 60-68, col. 4, lines 40-47). Inherently, the viewing assets include encoded digital video assets.

Regarding claim 16, Gordon further discloses the usage data included data indicative of viewer demand (e.g., how many times a particular asset is accessed and during what



Art Unit: 2623

time) and data indicate of change in viewer demand (indicative of unused asset) – see col. 8, lines 41-60).

Regarding claim 17, Gordon further updating the propagation priority of a particular asset in a usage class based on a difference between a usage level of the usage class and a usage level of the particular asset determined from the accumulated usage data (e.g. the propagation priority of particular asset (i.e. earthquake or other asset of news) in news class is updated based on the difference between usage level of news and a usage level of particular asset (earthquake) determined from the accumulated usage data (col. 7, line 52-col. 8, line 4).

Regarding claim 19, Gordon further discloses streaming a replica of the copied one of the assets from the particular video server to a television of a viewer in response to receiving a request to deliver the asset (providing a copied asset stored in storage device at headends or hubs to a television (26) for display in response to user request for the asset – figure 2, col. 4, lines 48-67).

Regarding claim 30, the limitations of the system that correspond to the limitations of the processed as claimed in claim 1 are analyzed as discussed with respect to the rejection of claim 1. Gordon further discloses communication channel between operations centers, headends, hubs, end users (figure 2) reads on the claimed

Art Unit: 2623

communication channel; the managers for controlling the copying between the headends, hubs (figures 2-8) reads on the claimed “control unit...”

Regarding claim 31, Gordon further discloses the control unit is configured to record usage data for the assets stored on each of the local video storage (usage manager records usage data for assets stored on each of the local storage device – col. 8, lines 41-67).

Regarding claim 32, Gordon further discloses a plurality of distribution networks (networks that connect between headends/hubs to end users – figures 2-8) to provide channels for delivering viewing assets to viewer televisions, each distribution network connected to a subset of the video server (each network connected to a local server/hub/headend – figure 2).

Regarding claim 33, Gordon further discloses the control unit is configured to accumulate usage data on viewing assets from the video server (figures 3-8; col. 8, lines 41-67).

Regarding claims 34, 36-37, 40-46, the limitations as claimed are directed toward embodying the process of claims 1, 4-5, 9, 12-14, 16-19 respectively in “program storage media storing executable instructions”. Gordon further discloses all the functions are performed by the system (see including, but is not limited to, col. 3, lines

Art Unit: 2623

20-68). Thus, the data processing apparatus inherently comprises program storage media storing computer executable instructions so that when executed to perform the process as discussed in the rejections of claims 1, 4-5, 9, 12-14, 16-19.

Regarding claim 51, Gordon discloses a process for propagating digital viewing assets to video servers, the process comprising:

propagating a plurality of viewing assets to video servers based on propagation priority, each of the propagation priorities comprising a first priority associated with a viewing asset and a second priority associated with one of the video servers (providing a plurality of viewing assets to storage devices at headends, hubs, etc. based on propagating priority such as usage level, available space of storage device, bandwidth capability of network connected to the storage device, etc., each propagation priority comprising priority associated with viewing asset such as user demand, popularity of the viewing object, and priority associated with the video server such as user demand at particular headend/hub, storage available of storage device at the headend/hub, bandwidth capability of the network connected to the particular headend/hub, etc. – see including, but are not limited to, col. 3, lines 40-67, col. 4, lines 60-67, col. 5, lines 40-62; col. 6, line 5-col. 9, line 12);

the propagation priorities providing a ranking of the viewing assets on the basis of predicted economic values associated with propagation of the viewing assets (e.g. ranking propagation of the assets in copy order and most used viewing assets/or asset with higher weighting factor are copied/propagated first (col. 8, line 40-col. 9, line 43);

accumulating usage data on individual ones of the viewing assets stored on the video servers (e.g. how many times particular asset is accessed during what time, what asset is unused, etc. col. 8, lines 41-67);

updating the propagation priority based in part on the usage data (updating copying priority based on usage information such as update the propagation priority so that most used assets/high demand assets are copied first –col. 7, line 30-col. 9, line 43).

Regarding claim 52, the additional limitations as claimed correspond to the additional limitations as claimed in claim 13, and are analyzed as discussed with respect to the rejection of claim 13.

Regarding claim 54, Gordon further discloses the usage manager keeps track of how many times a particular assets has been accessed, the usage information is used for propagating of the assets such as most used assets are copied first (col. 8, line 41-col. 9, line 43). Thus, the first priority is based in part of a counter value, the counter value measuring usage of the selected one of the assets (propagation priority comprises priority based on usage level/popularity of particular assets which include how many times a particular assets has been accessed).

Regarding claim 55, Gordon further discloses the second priority is based in part on a bandwidth for streaming the selected one of the assets from the one of the video

Art Unit: 2623

servers to a set of viewers (available bandwidth of the particular networks that connected to a set of viewers – col. 5, lines 40-62; col. 9, lines 1-43).

Regarding claims 56-57, 61, 67-68, the limitations as claimed correspond to the limitations as claimed in claims 1-2, 5, 9-10, and are analyzed as discussed with respect to the rejection of claims 1-2, 5, 9-10.

Regarding claims 59-60, the limitations as claimed correspond to the limitations as claimed in claim 4, and are analyzed as discussed with respect to the rejection of claims 4, wherein the storage device in claim 59 is interpreted as storage device at video server as claimed in claim 4.

Regarding claim 63, Gordon further discloses selecting a target device (storage device to be a target video asset device at particular location – col. 5, lines 41-63; col. 6, lines 25-35; col. 7, line 52-col. 8, line 5).

Regarding claims 70-73, the limitations as claimed correspond to the limitations as claimed in claims 12-15 and are analyzed as discussed with respect to the rejection of claims 12- 15.

Regarding claim 74, Gordon further discloses providing viewing assets to storage device based on popularity/user demand of the assets, available space of the storage

Art Unit: 2623

device, bandwidth capability of the network connected to the storage device, etc., the storage device stores the assets during the asset's useful life (col. 4, lines 60-67; col. 5, lines 40-62, col. 6, lines 5-50, col. 7, lines 18-col. 9, line 43). Inherently, the retention value comprises:

- a first value associated with the viewing asset and indicative of an economic value of retaining a set of replicas of the viewing asset on the video server (value associated with usage/popularity of the asset);

- a second value associated with the target video server and indicative of an economic value of retaining the set of replicas on the target video server (value associated with economic value for storing/retaining the asset at the storage device during or after asset's useful life).

Regarding claim 75, Gordon discloses the providing the asset to storage device based on usage information such as copying the most used asset first (col. 8, line 41-col. 9, line 11). Inherently, the first priority is calculated based on first component associated with a user demand (usage information) for the selected asset.

Regarding claim 76, Gordon further discloses the first component comprise short term viewer demand (e.g. in hours), medium term viewer demand (e.g. in weeks), total number of requests (how many times a particular assets has been accessed), usage class data (movie, poster, news, etc.), or any combination thereof (col. 8, lines 41-60).

Regarding claim 77, Gordon further discloses the component is associated with a coefficient indicative of an importance associated with the particular first component (e.g. movie with weighting factor of 1.0, poster with weighting factor of 0.1 – col. 9, lines 1-43).

Regarding claim 79, Gordon further discloses the second priority is calculated based on second component associated with a local environment of the target video server (i.e., user demand at particular headend/hub that comprises storage device, available space of storage device of particular headend/hub, bandwidth available of the network connected to particular headend/hub, etc. – col. 3, lines 20-67; col. 5, lines 45-62; col. 7, line 16-col. 8, line 4; col. 9, lines 1-42).

Regarding claim 80, Gordon further discloses the second component comprises asset classification (i.e. news, poster, movie, etc.), number of replicas available to the target video server, number of replicas stored on the target video server, available delivery paths to stream the selected assets to users, available bandwidth between target video server and users, or any combination thereof (see including, but are not limited to, col. 7, lines 1-col. 9, line 42).

Regarding claim 81, Gordon further discloses the second component is associated with a coefficient indicative of a weight associated with a particular second component (e.g.

Art Unit: 2623

at particular location, assigning weighting factor of 1.0 for a movie and weighting factor of 0.1 for foster – col. 9, lines 25-43).

Regarding claim 83, Gordon further discloses the retention value comprises a third priority associated with the viewing asset (expiration time, date, popularity, etc.) and a fourth priority associated with the target video server (usage level of particular server, bandwidth available of the network connected to particular server, available space of storage device at particular server, etc. – col. 4, lines 60-67; col. 5, lines 40-63; col. 6, lines 5-55; col. 7, lines 42-67; col. 8, line 41-col. 9, line 43).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 78, 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 5,920,700) as applied to claims 77 and 81 above.



Art Unit: 2623

Regarding claim 78 and 82, Gordon discloses a process as discussed in the rejection of claim 78 and 81. However, Gordon does not specifically disclose the coefficient associated with the component can be configured by a user. Official Notice is taken that the user configures coefficient associated with component is well known in the art. For example, the user input coefficient indicative of a weight associated with particular item/genre such as movie/item is selected as "strong like", "like", "dislike" or a ranking/rating number of interest. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the well-known teaching in the art in order to allow user to explicitly input the level of interest therefore improve efficiency in targeting data to user.

7. Claims 3, 8, 20-29, 35, 39, 47-50, 58, 62, 66 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 5,920,700) as applied to claims 1, 12 above, and in view of Noritomi (US 6,473,902).

Regarding claim 3, Gordon discloses a process as discussed in the rejection of claim 1. Gordon further discloses deleting lower economic value assets (unused assets, assets with expired date, etc.) and adding/copying assets with higher economic values (i.e. high demand/popular asset, new asset, etc.) – col. 8, line 41-col. 9, line 42). However, Gordon does not specifically disclose selecting a portion of the replica of one or more viewing assets in response to the portions of the replica of one or more viewing assets

Art Unit: 2623

having a total data size of at least as large as a data size of the mission portion of the selected asset.

Noritomi teaches selecting a portion of the replica of one or more viewing assets in response to the replica of one or more viewing assets having a total data size at least as large as a data size of the missing portion of the selected asset (select deletion candidate to be deleted to free space that large enough to save new program- col. 11, line 50-col. 12, line 18 and figures 13-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the teaching as taught by Noritomi in order to optimize storage space utilization such as copying entire asset into the storage or minimizing interruption of data.

Regarding claim 8, Gordon discloses a process as discussed in the rejection of claim 1. Gordon further assets with expired date is flag for deletion or unused asset is deleted— col. 7, lines 10-15; col. 8, lines 48-60). However, Gordon does not specifically disclose provide asset elements in one or more Elists.

Noritomi teaches the portion of replica of one or more viewing assets consists of replicas of asset elements belonging to one or more Elists (deletion candidate list – col. 10, line 50- col. 12, line 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the teaching as further taught by Noritomi in order to allow the user to easily manage the deletion of data.

Regarding claims 58, 66, 69 the additional limitations as claimed correspond to the additional limitations of claims 3, 8, 15 and are analyzed as discussed with respect to the rejection of claims 3, 8 and 15.

Regarding claim 20, the limitations that correspond to the limitations of claim 1 are analyzed as discussed with respect to the rejection of claim 1. Gordon further discloses providing permissive flag to assets to be deleted and providing deletion orders (col. 6, lines 10-15; col. 7, lines 10-15; col. 8, lines 40-67). However, Gordon does not specifically disclose constructing a table of element deletion lists for the target video storage; and selecting a group of element deletion lists from the table, the group having a data size at least as large as a data size of a portion of a replica of another viewing asset not stored on the target video storage.

Noritomi teaches constructing a table of element deletion lists for the target video storage and selecting a group of element deletion lists from the table (construct a table of element deletion candidate lists and selecting a group of element from table of deletion candidate lists – col. 10, line 50- col. 12, line 11, figures 13-16). Noritomi further discloses selecting a group of element to be deleted and the group having a total data size at least as large as a data size of the missing portion of the selected asset (select deletion candidate to be deleted to free space that large enough to save new program- col. 11, line 50-col. 12, line 18 and figures 13-16). Therefore, it would have been

Art Unit: 2623

obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the teaching as taught by Noritomi in order to easily manage the deletion of data and furthermore to optimize storage space utilization such as copying entire asset into the storage or minimizing interruption of data.

Regarding claim 21, the additional limitations as claimed correspond to the additional limitations as claimed in claim 2, and are analyzed as discussed with respect to the rejection of claim 2.

Regarding claim 22, Gordon in view of Noritomi discloses the process as discussed in the rejection of claim 20. Gordon further discloses the set of deletion with lower retention value than the propagation priority of the another asset (assets with expired date/unused assets to be deleted has lower retention value (value associated with asset's useful life, popularity, bandwidth available, etc.) than the new asset/popular asset to be copied – 8, line 40-col. 9, line 43).

Regarding claim 23, Gordon in view of Noritomi discloses the process as discussed in the rejection of claim 22. Noritomi further discloses picking one of the lists having a data size at least as large as the portion of the replica on the another asset (select deletion candidate to be deleted to free space that large enough to save new program- col. 11, line 50-col. 12, line 18 and figures 13-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use

the teaching as further taught by Noritomi in order to optimize storage space utilization such as copying entire asset into the storage or minimizing interruption of data.

Regarding claim 24, Gordon in view of Noritomi discloses the process as discussed in the rejection of claim 20. Noritomi further discloses deletion candidate is selected according to significant in the priority- and if the space area is not enough to save the copies, additional deletion is performed to free space for new data received from the main server (col. 10, line 40-col. 11, line 64). As a result, after copying, the data has priority next to the deleted data shift to the low priority level and will be added to deletion list if more space is required. Thus, the table of element deletion lists (file 124) is updated after copying the portion of the replica of the another asset. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the teaching as further taught by Noritomi in order to improve efficiency in maintaining of data in storage device.

Regarding claim 25, the additional limitations as claimed correspond to the additional limitations as claimed in claim 11 and are analyzed as discussed with respect to the rejection of claim 11.

Regarding claim 26, the limitations that correspond to the limitations of claim 1 are analyzed as discussed with respect to the rejection of claim 1. For the limitation of "selecting a target video server", Gordon discloses selecting of a storage device of

Art Unit: 2623

video server at particular location such as in New York, in Denver, etc. for targeting the asset according to user demand, space available of storage device, bandwidth available of the network at that location for copying the asset (col. 3, lines 20-67, col. 4, lines 59-67; col. 5, lines 40-63; col. 7, line 16-col. 9, line 43) read on "selecting a target video server".

Gordon further discloses deleting unused assets, asset with expired date from the storage device and copying new asset, asset with high demand, to the storage device (col. 8, line 40-col. 9, line 43). The retention value being predictive of an economic value of retaining the set of replicas (low priority asset/unused asset/asset with expired date of retaining (being predictive as low economic value since no one request for it) is not retained at the storage device of video server). However, Gordon does not specifically disclose the replicas occupying enough space to store one of the viewing.

Noritomi discloses the replicas occupying enough space to store the one of the one of the assets (col. 10, line 40-col. 12, line 18, figures 13-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon to use the teaching as taught by Noritomi in order to optimize storage space utilization such as copying entire asset into the storage or minimizing interruption of data.

Art Unit: 2623

Regarding claim 27, Gordon in view of Noritomi discloses the process as discussed in the rejection of claim 26. Gordon further discloses deleting unused asset/providing permissive flag for asset with expired date to be deleted from the storage device and copying/storing new asset into the storage device (col. 7, lines 1-15, col. 8, lines 40-col. 9, line 13). Inherently, copying of the assets includes searching for one or more set of replicas of asset elements to delete (e.g. searching for asset with expired date or unused assets) so that the asset with expired date or unused assets are identified.

Alternatively, Noritomi also discloses the controller 16 selects, as a "deletion candidate" a group of the video programs with are less significant in the priority. The deletion candidate is checked and listed in the space file 124 and then deleted – col. 10, line 50-col. 11, line 64). Necessarily, copying one of the assets includes searching for one or more sets of replicas of asset elements to delete (searching for deletion candidate) from a table of element deletion lists (file 124).

Regarding claim 28, Gordon in view of Noritomi teaches a process as discussed in the rejection of claim 26. Gordon further discloses updating the retention values in response to anticipated changes in viewer request levels for assets (i.e. assigning high retention value/asset useful life for popularity/new asset, or low retention value for unused assets, asset with expired date – col. 7, lines 10-15; col. 8, line 18-col. 9, line 43).

Regarding claim 29, the additional limitations that correspond to the additional limitations of claim 14 are analyzed as discussed with respect to the rejection of claim

Art Unit: 2623

14. Gordon further discloses copying the asset based on at least in part on accumulated data (i.e. popularity of the asset) and updating the data/all registers in response to the copying/deleting of assets (col. 6, line 15-col. 7, line 67). As a result, the retention value is updated based on at least in part on the accumulated data (for example, retention value is updated as high for high demand asset).

Regarding claims 35, 39, 47-50, the limitations as claimed are directed toward embodying the process of claims 3, 8, 20, 22-23, 25 respectively in "program storage media storing executable instructions". Gordon further discloses all the functions are performed by the system (see including, but is not limited to, col. 3, lines 20-68). Thus, the data processing apparatus inherently comprises program storage media storing computer executable instructions so that when executed to perform the process as discussed in the rejections of claims 3, 8, 20, 22-23, 25.

Regarding claim 62, the additional limitations as claimed correspond to limitations of constructing a table... ; selecting a group... in claim 20, and are analyzed as discussed in the rejection of claim 20.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



Ellis et al. (US 6,898,762) discloses client server electronic program guide.

Mori et al. (US 2004/0210932) discloses program preselecting/recording apparatus for searching an electronic program guide for programs according to predetermined search criteria.

Herz et al. (US 5,351,075) discloses home video club television broadcast system.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone

Art Unit: 2623

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**It is noted that Group Art Unit 2611 has been changed to Group Art Unit 2623**

SPH  
May 10, 2006

  
CHRIS KELLEY  
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